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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/753,327	12/30/2000	Hong Xie	42390.P9475	1213

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EXAMINER	
MITCHELL, JAMES M	
ART UNIT	PAPER NUMBER
2813	

DATE MAILED: 09/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/753,327

Applicant(s)

XIE ET AL.

Examiner

James M. Mitchell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16, 18, 20-34 and 36 is/are rejected.
- 7) ☒ Claim(s) 17, 19, 35 and 37 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 1 rejected under 35 U.S.C. 102(e) as being anticipated by Iwaya et al.

(U.S. 6,392,295).

3. Iwaya (Fig 17) discloses an integrated circuit (IC) package comprising; (cl. 1, 20) a first power plane (i.e. small pads on 1a; not labeled); and a power bar (Vcc) including a conductive first section separate from the surface and therefore a panel electrically connected (i.e. wires; not labeled) to the first power plane along a first adjacent edge

4. Claim 6, 7, 11, 20, 25 and 29 rejected under 35 U.S.C. 102(e) as being anticipated by Sato et al. (U.S. 2002/0000645)

5. Sato (Fig 1, 17A) discloses (cl. 6, 20) an integrated circuit socket comprising a power bar, wherein the power bar includes a first conducting panel 18C) electrically coupled (integral) to a first plurality of pads (25A-1); (cl. 7, 25) with one or more contacts (44) extending beyond the periphery of the conducting panel and coupled (Fig 1) to the

first panel; (cl. 11, 29) and the contacts having a spring constant (i.e. clamp shown in Fig 17A).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-16, 18, 20-34 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Werbizky (U.S. 4,814,857).

8. Werbizky (Fig 1) discloses an integrated circuit (IC) package (10) and deliver system comprising; (cl. 1, 20) a first power plane (15, 17); and a power bar (12, 42; i.e. power/input-output signals run are capable of being conducted through material) including a conductive first section (i.e. pin & Fig 3) separate from the surface, 15 and therefore a panel electrically connected (i.e. integral) to the first power plane along a first adjacent edge; (cl. 2) the IC package further includes a second power plane (i.e. other pin) non-conducting/electrically isolated (i.e. conductors separated in ceramic) from the first power plane; and a second conducting panel electrically connected to the second power plane of the IC package along a second adjacent edge; (cl. 4) with one or more conducting bumps (i.e. top of pin) electrically connected to the first/second conducting panel (i.e. integral); (cl. 6) an Integrated Circuit (IC) socket comprising: a power bar carrier (20), wherein the power bar carrier includes a first conducting

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panel (21) electrically coupled (i.e. integral) to a first plurality of conducting pads (27); (cl. 7) wherein the first conducting panel further includes one or more conducting contacts extending beyond the periphery of the conducting panel and coupled to the first conducting panel/ bent conducting material (i.e. L shape of items 27, 21) ; (cl. 9) wherein the one or more conducting contacts of package/ module are pressed against contacts of socket and therefore are compressed and electrically engageable (cl. 13) a second conducting panel (23, 24, 25) is insulated (ceramic) from the first conducting panel; (cl. 14, 16) an inherent activation mechanism ("pluggable"; abstract) that causes the power bar carrier to engage a power bar of a corresponding IC package; (cl. 15) the IC socket of Claim 6 further comprising one or more pin receptacles (i.e. hole in socket; not labeled); (cl.16) the IC socket further comprising a first activation mechanism ("pluggable") that causes the power bar carrier to engage a power bar of a corresponding IC package with a first force and a second activation mechanism that causes the one or more pin receptacles to engage one or more pins with a second force ("bolt holes", 15' adapted to hold the assembly together); (cl.18) wherein the activation mechanism that simultaneously causes the power bar carrier to engage a power bar with a first force and causes the one or more pin receptacles to engage one or more pins with a second force (i.e. bolts hold assembly together after module plugged into socket; abstract).

9. Werbizky does not appear to show that the conductors 12, 15 are power bars.

10. In any event, the prior art forms the same structure as applicants. It has been held that the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

11. With respect to the process limitation of claims 8 and 26 that "contacts are stamped.

12. With respect to produce by process claim "without use of flux", the prior art structure is the same as the claimed invention. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)

13. Claims 1-16, 18, 20-34 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott (U.S. 5,365,686).

14. Scott (Fig 5, 6) discloses an integrated circuit (IC) package (10) and deliver system comprising; (cl. 1, 20) a first power plane (66); and a power bar (i.e. L shaped conductor connected to chip, 48; i.e. power/input-output signals run are capable of being conducted through material) including a conductive first section (66) separate from the surface and therefore a panel electrically connected (i.e. integral) to the first

power plane along a first adjacent edge; (cl. 2) the IC package further includes a second power plane (i.e. other pin, 66) non-conducting/electrically isolated (i.e. conductors separated by item 46) from the first power plane; and a second conducting panel electrically connected to the second power plane of the IC package along a second adjacent edge; (cl. 4) with one or more conducting bumps (i.e. bottom of pin; Fig 4) electrically connected to the first/second conducting panel (i.e. integral); (cl. 6) an Integrated Circuit (IC) socket comprising: a power bar carrier (56), wherein the power bar carrier includes a first conducting panel (56) electrically coupled (i.e. integral) to a first plurality of conducting pads (i.e. protrusions; not labeled); (cl. 7) wherein the first conducting panel further includes one or more conducting contacts extending beyond the periphery of the conducting panel and coupled to the first conducting panel/ bent conducting material (i.e. L shape) ; (cl. 9) wherein the one or more conducting contacts of package/ module are pressed against contacts of socket and therefore are compressed and electrically engageable (11); (cl. 13) a second conducting panel is insulated from the first conducting panel; (cl. 14, 16) an inherent activation mechanism (11; abstract) that causes the power bar carrier to engage a power bar of a corresponding IC package.

15. Scott not appear to show that the conductors 12, 15 are power bars.

16. In any event, the prior art forms the same structure as applicants. It has been held that the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

17. With respect to the process limitation of claims 8 and 26 that "contacts are stamped.

18. With respect to produce by process claim "without use of flux", the prior art structure is the same as the claimed invention. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Allowable Subject Matter

19. Claims 17, 19, 35, 37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

20. The prior art does not disclose or make obvious having a first and second activation mechanism that causes the power bar carrier to engage a power bar of a corresponding IC package, such that a first force of the first mechanism is substantially equal to a second force of the second mechanism including all the limitations of the independent claim.

Conclusion

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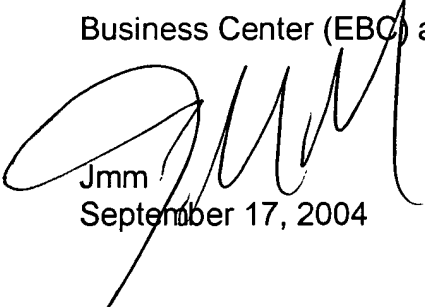
21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kinsman (U.S. 6,437,435), Chuang (U.S. 6,243,267), Frack (U.S. 3,582,865), Figueroa (U.S. 6,672,912); Begis (U.S. 5,610,801)

The prior art discloses: in Kinsman (Fig 2a) a first and second adjacent conductors on chip package capable of being used of power; in Chuang, the use of first and second activation mechanisms connected to a socket to hold chip package; in Frack a chip package mounted in a socket with power bars and in Figueroa the use of chips with a bar protruding from the underside of the chip into a socket; in Begis the use of connectors formed on individual chip to mount to a board;

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M. Mitchell whose telephone number is (571) 272-1931. The examiner can normally be reached on M-F 8:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead Jr. can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jmm
September 17, 2004



ERIK KIELIN
PRIMARY EXAMINER